REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 are currently pending in the application. Claims 1-3, 5-9, 11 and 12 are amended, and Claims 4 and 10 are canceled by the present amendment without prejudice or disclaimer. Claims 1-3, 5-9, 11 and 12 are amended to correct minor informalities, and Claims 1 and 7 are amended to incorporate the subject matter of canceled Claims 4 and 10, respectively.

In the outstanding Official Action dated May 3, 2005, Claim 8 was objected to because of a minor informality; and Claims 1-12 were rejected under 35 U.S.C. §102(b) as anticipated by Makiguchi et al., "*A Human Factor's Analysis of Optical Distortion for Automotive Windshields*" published by The Society for Automotive Engineering, hereinafter "Makiguchi".

The Advisory Action of August 18, 2005 indicated Claims 1-3, 5-9, 11 and 12 were non-statutory based on 35 U.S.C. § 101 as non-tangible since there is no mention of hardware to perform events recited therein. In response, Claims 1-3, 5-9, 11 and 12 are amended to recite a "computer-implemented method" instead of a "method". Accordingly, Applicants respectfully submit that Claims 1-3, 5-9, 11 and 12 are tangible since hardware to perform events is mentioned in these claims.

In response to the objection to Claim 8, this claim is amended to properly recite "the computer-implemented method of Claim 7". Claims 9 and 11 are also amended to correct similar minor informalities. Accordingly, Applicants respectfully request that the objection to Claim 8 be withdrawn.

The outstanding Official Action asserts that Makiguchi teaches all the elements of Claims 1-12. Applicant respectfully traverses this rejection.

Briefly recapitulating, the present claims are directed to a method for evaluating the dynamic perspective distortion of a transparent body by obtaining distance values between adjacent perspective evaluation points and selecting a reference value from among the distance values. The dynamic perspective distortion of the transparent body is then evaluated by obtaining ratios of distance values to the reference values.

Specifically, Claim 1 recites, *inter alia*, a method for evaluating the dynamic perspective distortion of a transparent body, comprising:

> "...obtaining distance values between adjacent perspective evaluation points;
> determining a ***reference value***, among the distance values, and
> evaluating the ***dynamic perspective distortion*** of the transparent body by obtaining ratios of the distance values to the ***reference value***."

Claim 7 recites substantially similar features, but is directed to a method for correcting a three-dimensional transparent body using similar steps to those recited in Claim 1.

Both Claims 1 and 7 have incorporated the subject matter of Claims 4 and 10 that require an orthogonal grid pattern as the virtual evaluation pattern. Fig. 7 depicts an exemplary view of the comparisons of ratios of distance values to the reference values, also referred to in the specification as grid distance ratios. A grid distance and a grid distance ratio can be measured along either a row or a column direction. From the graph depicted on Figure 7, a maximum gradient of grid distance ratio as well as a maximum value of grid distance ratio can be determined. ***By analyzing these parameters, an abrupt change in distortion values can be detected and therefore corrected. An abrupt change results in a visual flicker of an image moving dynamically past the three-dimensional transparent body.***

In a non-limiting exemplary embodiment, the grid distance ratio is a value obtained by dividing a grid distance by a reference value in the row or the column containing the grid

distance. Thus, regardless of whether a series of grid distances are uniformly large, or uniformly small across a series of grid points of the "orthogonal grid pattern," the grid distance ratio is represented as even or uniform, which indicates a low level of dynamic perspective distortion.

Alternatively, when inspection is performed and a series of grid distances vary in distance across a series of grid points of the "orthogonal grid pattern," the grid distance ratio is schematically represented as uneven over these points due to the variations of the grid distance values in relation to the reference value, which indicates a high level of dynamic perspective distortion. An example of an elevated level of dynamic perspective distortion is depicted by the series of graph points noted as "MAXIMUM GRADIENT OR GRID DISTANCE RATIO", depicted in Fig. 7.

When sensed by a human, even though the grid distances may be uniformly high over a specified set of adjacent grid points of the transparent body, the human will not sense a flicker, as discussed above. Only when the dynamic perspective distortion is high, indicating a variation of grid distance values over a set of adjacent orthogonal grid pattern points, does the human eye detect a flicker. The claimed invention is developed to detect and eliminate this flicker effect by detecting and reducing the dynamic perspective distortion in a transparent body.

Turning to the applied reference, Makiguchi describes a method for measuring optical distortion by defining a distortion angle at a driver's eye point using a plurality of points.[1] Specifically, Makiguchi describes that when two adjacent intersections P and Q are moved to P' and Q', as seen through the glass, the distortion angle is defined from the inner product of vectors between two intersections.[2]

[1] Makiguchi at p. 60, Figs. 1 and 2.
[2] Id. at p. 60, col. 2, lines 11-15.

However, Makiguchi fails to teach or suggest obtaining distance values of adjacent perspective evaluation points and ***using this information to evaluate the dynamic perspective distortion of a three-dimensional transparent object by obtaining ratios of the distance values to the reference values***, as described in the presently claimed method.

In addressing the above-noted claimed features, the outstanding Official Action relies on Figs. 1-2, and equation 1 of Makiguchi and states "[n]aturally, a measured value which deviated from the normal or reference source represents a dissimilar value, representative in the horizontal and vertical direction... [w]hat better way to graphically represent this information by creating a bar graph presentation reflective of distortion values."[3]

However, Makiguchi describes only that a distortion angle is defined from the inner product of vectors between two intersections, and fails to teach or suggest ***determining a reference value among distance values***. Further, Makiguchi is related only to determining the distortion angle relative to a plurality of specific points and therefore does not discuss evaluating a ***dynamic*** perspective distortion whatsoever, much less using a ***reference value*** to evaluate such a parameter.

Since Makiguchi is not concerned with evaluating a ***dynamic*** distortion value, only the values of the two evaluated points (P and Q) are used to determine a distortion angle in a specific area of the glass. By using a ***reference value***, the claimed method allows for the detection of a rapid change in distortion values of the glass over an area of the three-dimensional glass structure, not just one area defined by a plurality of points as described in Makiguchi. The advantages of the claimed method are discussed in detail above, and in the originally filed specification.[4]

[3] Outstanding Official Action at page 2, bottom.
[4] Specification at page 3, lines 16-25.

Thus, Makiguchi fails to teach or suggest ***determining a reference value***, among the distance values, and ***evaluating the dynamic perspective distortion of the transparent body by obtaining ratios of the distance values to the reference value***, as recited in Claim 1.

Further, amended Claim 2 recites that the dynamic perspective distortion of the transparent body is evaluated based on the rate of change of the ratios of the distance values to the ***reference value***. And amended Claim 3 recites that the minimum value among the distance values is selected as the ***reference value***, and the dynamic perspective distortion of the transparent body is evaluated based on the maximum value among the ratios of the distance values with respect to the minimum value. Claims 8 and 9 recite substantially analogous features to Claims 2 and 3 respectively.

The Official Action again states that the calculations performed to determine the dynamic perspective distortion, a recited in Claims 2 and 3, are inherent because each "calculation is obtainable given the data mentioned".[5]

"In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherently characteristic necessarily flows from the teachings of the applied prior art." *See* Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) and M.P.E.P. §2112.

As stated above, Makiguchi fails to teach or suggest ***obtaining the ratios of distance values to reference values*** which are used to perform the calculations recited in amended Claims 2 and 3. Therefore, in contrast to the assertion in the Official Action, the calculations recited in Claims 2 and 3 are not obtainable given the data generated by Makiguchi's method. Accordingly, Applicant respectfully submits that the Official Action has failed to meet the burden of providing this basis in fact and/or technical reasoning to support the assertion that

[5] Official Action of November 29, 2004, at page 5.

the calculations performed to determine the ***dynamic*** perspective distortion as claimed in Claims 2 and 3 are inherent in Makiguchi's disclosure.

Further, amended Claim 7 recites, *inter alia*, a method for designing three-dimensional transparent body, comprising:

> "...***correcting the three-dimensionally curved shape of the transparent body according to the evaluation***."

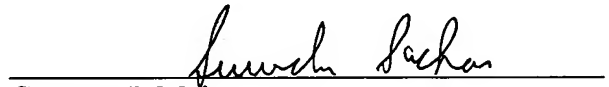
The Official Action fails to address this feature of amended Claim 7. Further, Makiguchi teaches only a method for analyzing a distortion angle between two points, and therefore fails to teach or suggest a step of correcting the three-dimensionally curved shape of the transparent body according to the evaluation, as recited in amended Claim 7.

Accordingly, for at least the reasons discussed above, Applicant respectfully requests that the rejection of Claims 1, 2, 3, 7, 8 and 9 under 35 U.S.C. §102(b) be withdrawn. As Claims 4-6 and 10-12 depend from amended Claims 1 and 7 respectively, it is also submitted that these claims patentably define over Makiguchi for at least the same reasons their respective parent claims do.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-3, 5-9, 11 and 12 is definite and patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Surinder Sachar
Registration No. 34,423

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

I:\ATTY\ATH\PROSECUTION\21'S\219227-US\219227 RCE AM 9.06.05.DOC